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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,064	11/17/2003	Anand Pande	15156US01	7036

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EXAMINER

TSAI, SHENG JEN

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/715,064		PANDE, ANAND	
	Examiner		Art Unit	
	Sheng-Jen Tsai		2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-6 are presented for examination in this application (10,715,064) filed on November 17, 2003.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Cohn et al. (US 4,556,960).

As to claim 1, Cohn et al. disclose a **circuit** [figure 1 shows the circuit]

comprising:

a processor [the present invention relates generally to the sequential allocation of addresses in a computer memory, and more specifically, to such an allocation which mitigates the damage resulting from hardware or software errors by reducing the possibility of relatively recent data being overwritten (column 1, lines 7-13); figure 1; it is inherent that a processor (or CPU) is included in a computer to perform the generation of addresses and other tasks]; **and**

a memory connected to the processor [the memory unit (figure 1, 7); the present invention relates generally to the sequential allocation of addresses in a computer memory, and more specifically, to such an allocation which mitigates the damage resulting from hardware or software errors by reducing the possibility of relatively

Art Unit: 2186

recent data being overwritten (column 1, lines 7-13)], **said memory storing a plurality of instructions** [the present invention relates generally to the sequential allocation of addresses in a computer memory, and more specifically, to such an allocation which mitigates the damage resulting from hardware or software errors by reducing the possibility of relatively recent data being overwritten (column 1, lines 7-13)], **wherein execution of the instructions by the processor causes:**

(a) **generating a sequence of binary addresses with a length N** [figure 1, 1 shows an address of length N (with a N-K portion and a K portion)], **wherein N is greater or equal to a desired sequence length 2D** [the corresponding 2D length is the N-K positions (length) of Gray Code, as shown in figure 1; note that N is greater than or equal to N-K], **wherein N is a power of 2** [binary word has a length of 8 (column 2, lines 16-20), which is a power of 2];

(b) **selecting a combination of 2D addresses from the generated sequence** [an address sequencer embodying the principles of the present invention includes a means for generating a sequence of binary words comprising a repeating cycle of 2^k linear (n, k, d) code words. Each linear code word contains k data bits and n-k check bits, the k data bits occupying the same positions in each word. The invention further includes a means for generating a sequence of binary words comprising words of a Gray code of dimension n-k. An individual Gray code word occurs consecutively 2^k times, and distinct Gray code words occur in the order in which they appear in the Gray code (column 1, lines 43-63); note that 2^k corresponds to 2D];

(c) **checking if the addresses in the selected combination satisfy the property of only one bit difference between consecutive addresses** [this the property of Gray Code (column 2, lines 53-67)]; and

(d) **repeating (b) and (c) until a combination of 2D addresses that satisfies the one bit difference property is found** [an address sequencer embodying the principles of the present invention includes a means for generating a sequence of binary words comprising a repeating cycle of 2^k linear (n, k, d) code words. Each linear code word contains k data bits and n-k check bits, the k data bits occupying the same positions in each word. The invention further includes a means for generating a sequence of binary words comprising words of a Gray code of dimension n-k. An individual Gray code word occurs consecutively 2^k times, and distinct Gray code words occur in the order in which they appear in the Gray code (column 1, lines 43-63); note that 2^k corresponds to 2D].

As to claim 2, Cohn et al. teach that **D is an arbitrary number** [figure 2 shows an example of the generated Gray Code with 32 codes (i.e., $2D=32$, thus $D=16$). It is understood that D depends on the number of Gray codes desired, and figure 2 shows that D is an arbitrary number because one is free to choose any subsequence from the 32-code sequence].

As to claim 3, Cohn et al. teach that **D is the depth of a data structure** [figure 1, 5 shows the data structure of N-K positions for generating Gray Code; figure 2 shows an example of the generated Gray Code].

As to claim 4, refer to "As to claim 1."

As to claim 5, refer to "As to claim 2."

As to claim 6, refer to "As to claim 3."

4. *Related Prior Art On Record*

The following list of prior art is considered to be pertinent to applicant's invention, but not relied upon for claim analysis conducted above.

- Jiang, (US Patent Application Publication 2004/0207547), "Method of Scalable Gray Coding."
- Pontius, (US 6,337,893), "Non-Power-Of-Two Gray-Code Counter System Having Binary Incrementer with Counts Distributed with Bilateral Symmetry."
- Yi, (US 6,703,950), "Gray Code Sequences."

Conclusion

5. Claims 1-6 are rejected as explained above.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheng-Jen Tsai whose telephone number is 571-272-4244. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheng-Jen Tsai
Examiner
Art Unit 2186

December 19, 2005


PIERRE BATAILLE
PRIMARY EXAMINER
1/5/06